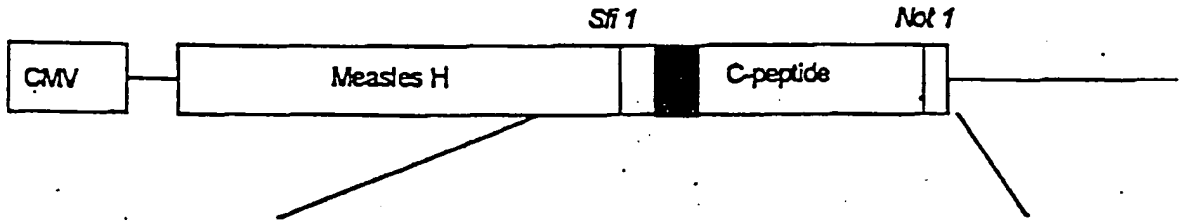
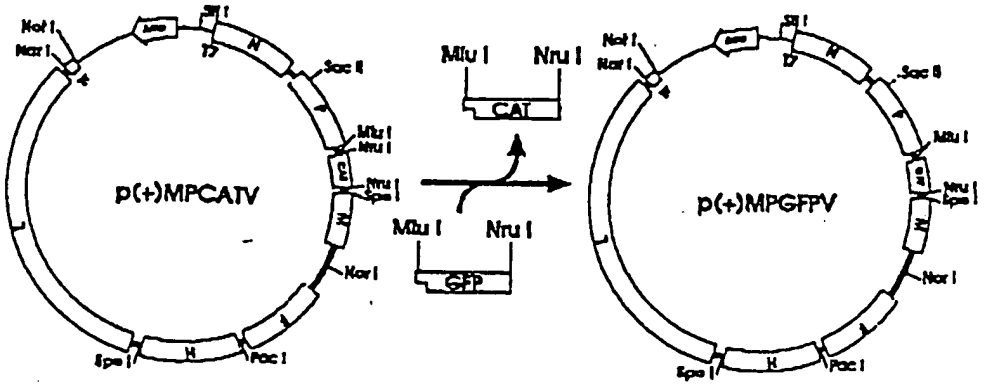


	Measles H	Sfi 1	Linker	C-peptide	Not 1
pCGH Fur CP	...REDGTN	AAQPAAAA	RLKR	...SLQKR	AAA
pCGH G4S CP	...REDGTN	AAQPA	GGGGS	...SLQKR	AAA

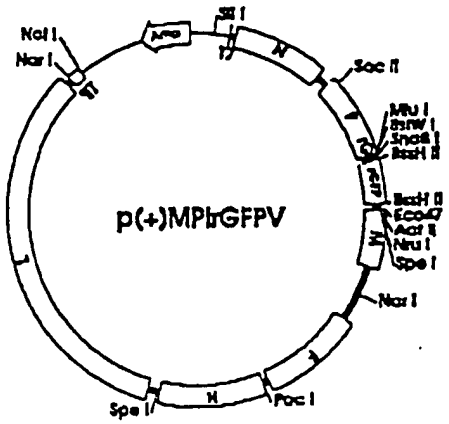
FIGURE 1

Cloning of GFP into p(+)MPCATV#32: construction of p(+)MPGFPV



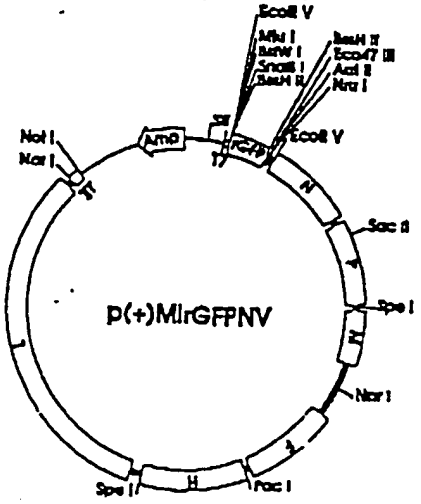
Cloning of GFP into p(+)MPCATV.

FIGURE 2



Map of p(+)MPIrGFPV

FIGURE 3



Map of p(+)MlrGFPNV

FIGURE 4

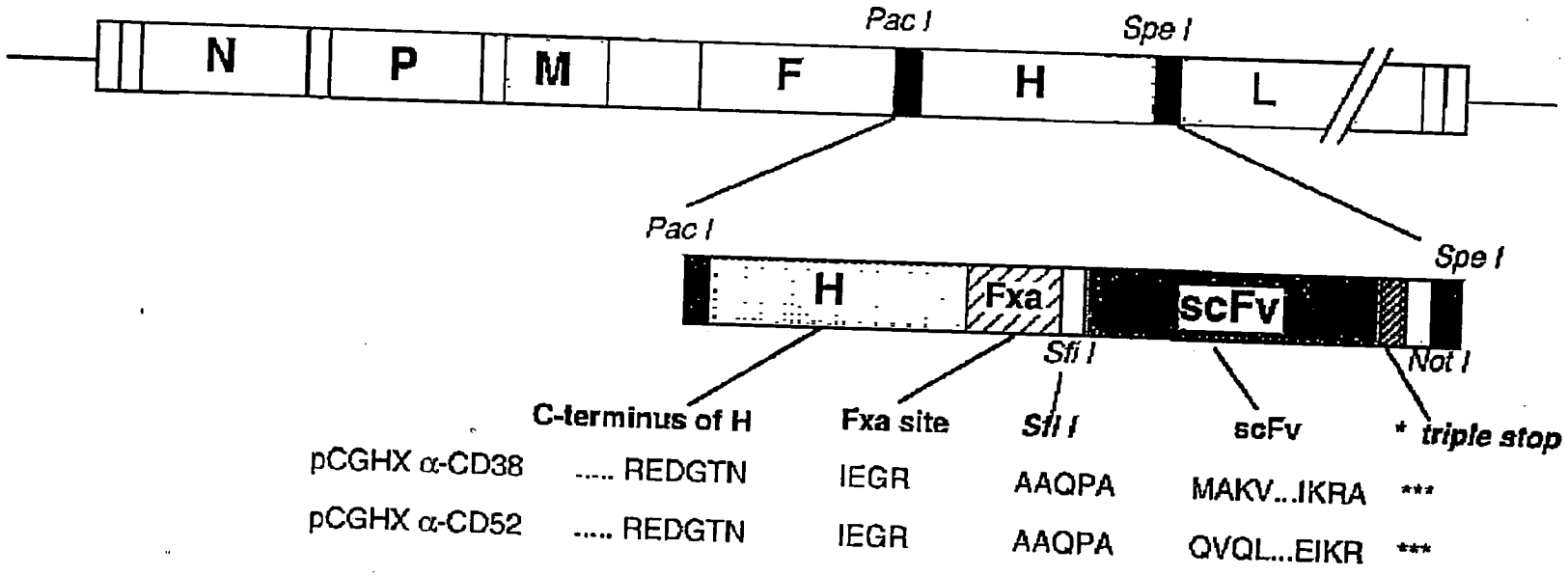
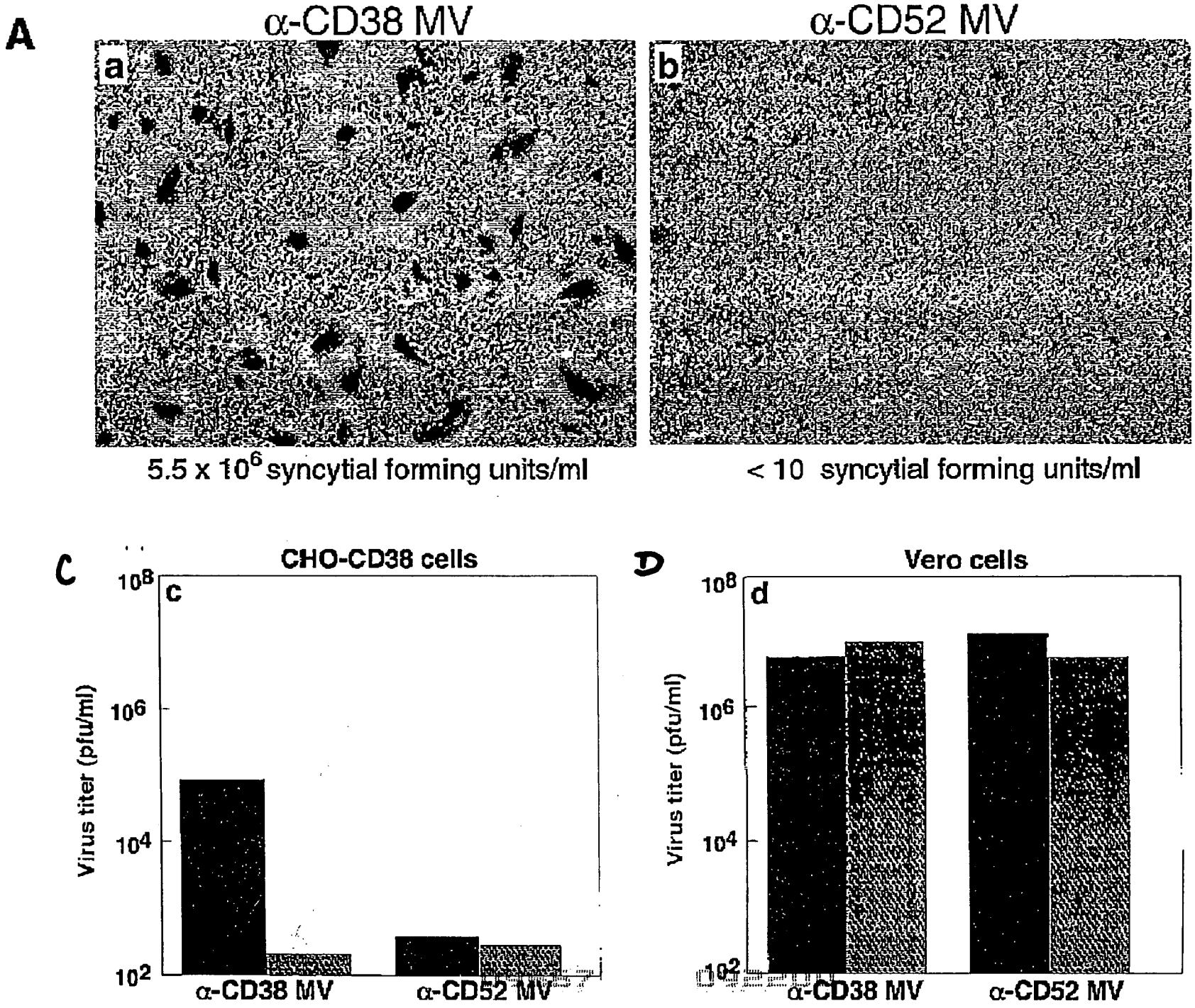


FIGURE 5

FIGURE 6



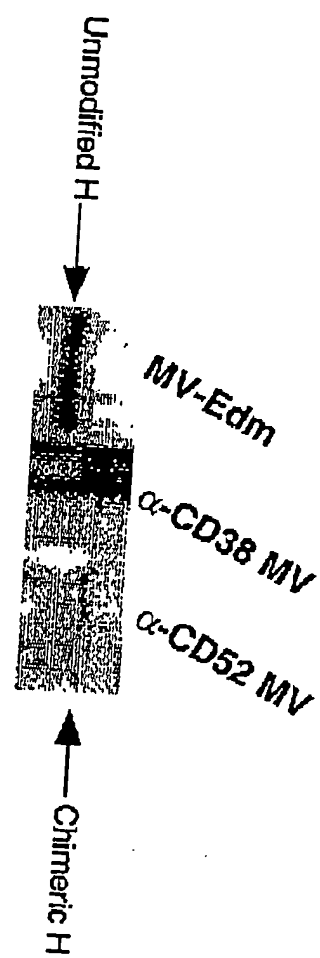


FIGURE 7

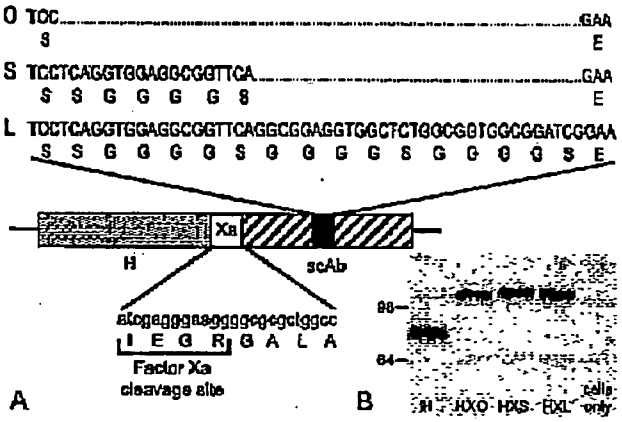


FIG. 8A

FIG 8B

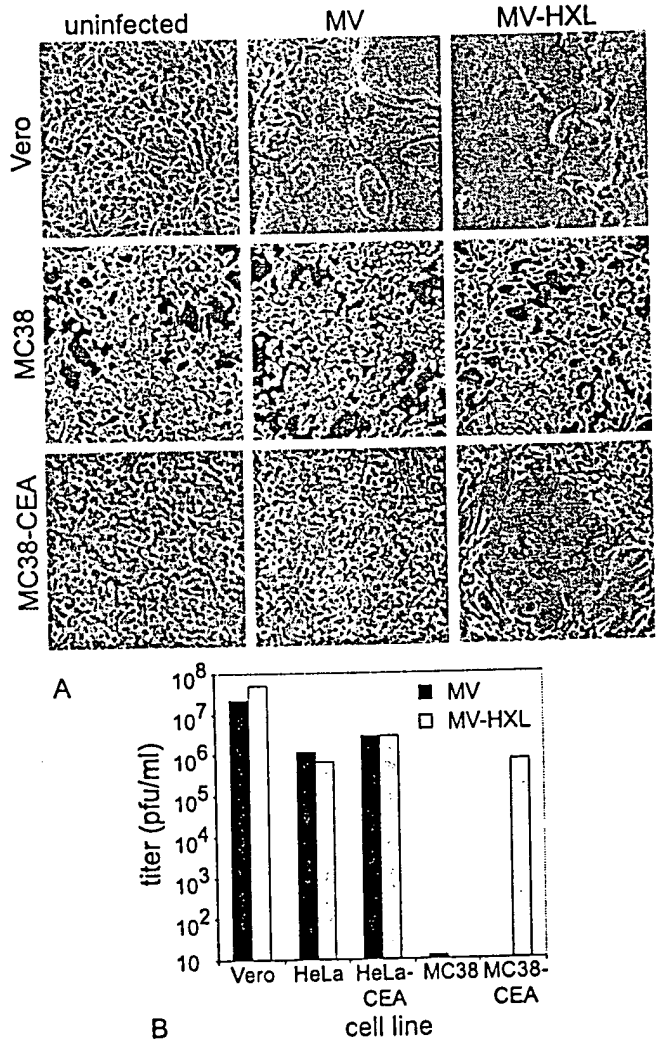

uninfected
MV
MV-HXL
Vero
MC38
MC38-CEA
A
MV
MV-HXL
titer (pfu/ml)
10^8
10^7
10^6
10^5
10^4
10^3
10^2
10
Vero
HeLa
HeLa-CEA
MC38
MC38-CEA
B
cell line

FIG. 9A-B

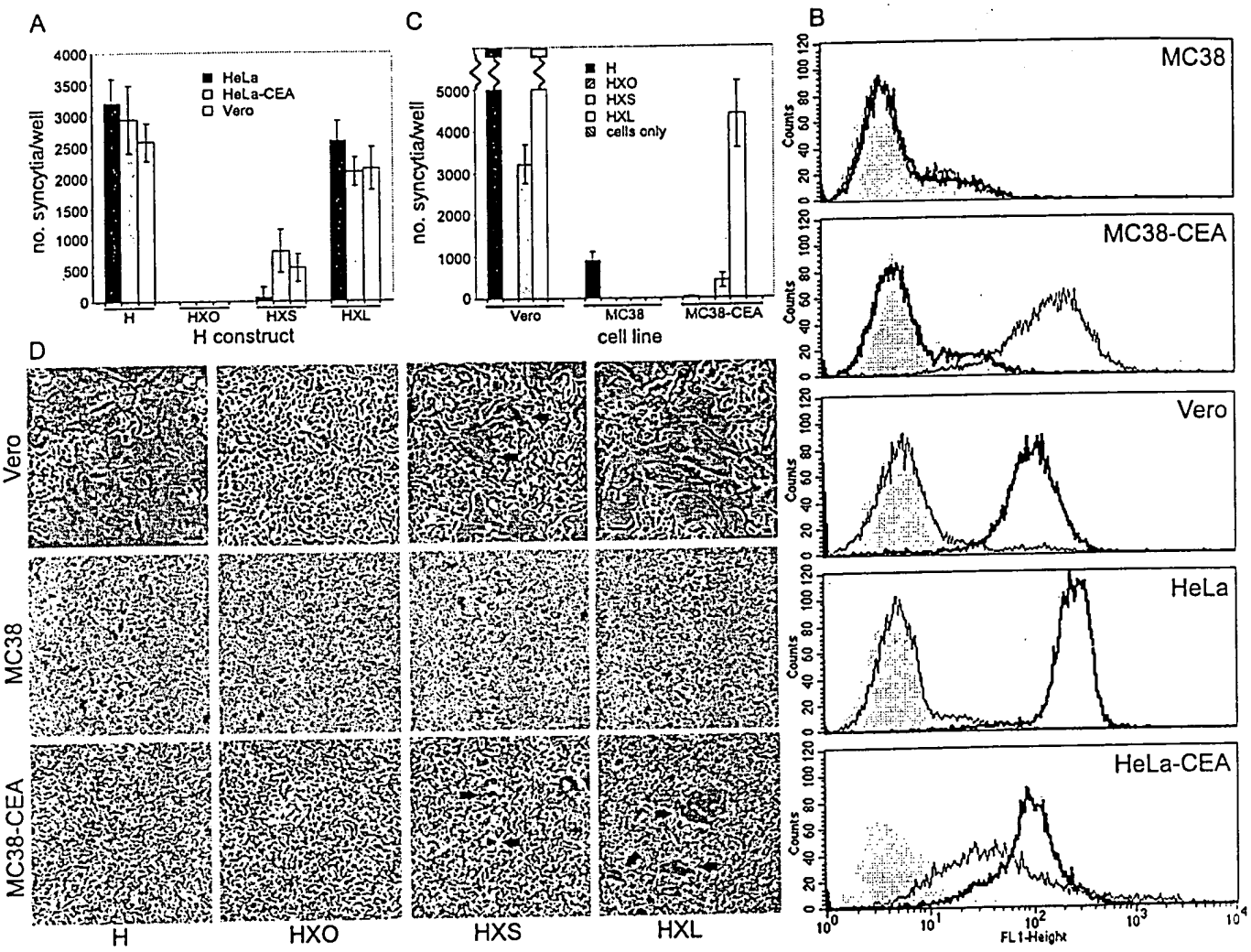

A
no. syncytia/well
HeLa
HeLa-CEA
Vero
H
HXO
HXS
HXL
H construct
C
no. syncytia/well
H
HXO
HXS
HXL
cells only
Vero
MC38
MC38-CEA
cell line
B
MC38
MC38-CEA
Vero
HeLa
HeLa-CEA
Counts
FL1-Height
D
Vero
MC38
MC38-CEA
H
HXO
HXS
HXL

FIG 10

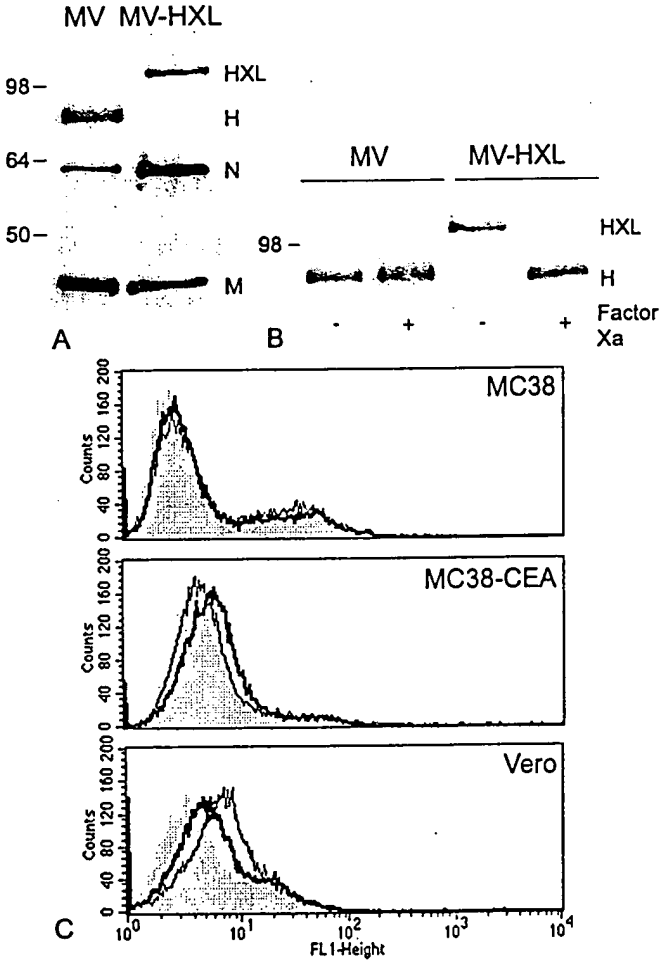

MV MV-HXL
98–
64–
50–
HXL
H
N
M
A
MV
MV-HXL
98 –
HXL
H
Factor Xa
- + - +
B
MC38
MC38-CEA
Vero
Counts
0 40 80 120 160 200
10^0 10^1 10^2 10^3 10^4
FL1-Height
C

FIG. 11

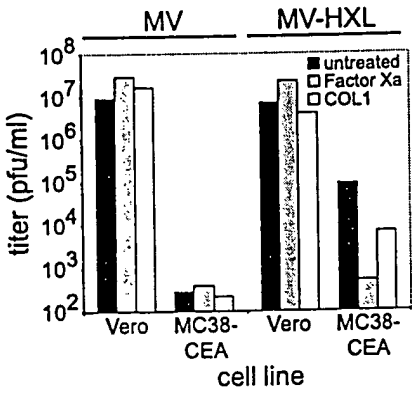

MV
MV-HXL
untreated
Factor Xa
COL1
titer (pfu/ml)
10^8
10^7
10^6
10^5
10^4
10^3
10^2
Vero
MC38-CEA
Vero
MC38-CEA
cell line

FIG. 12

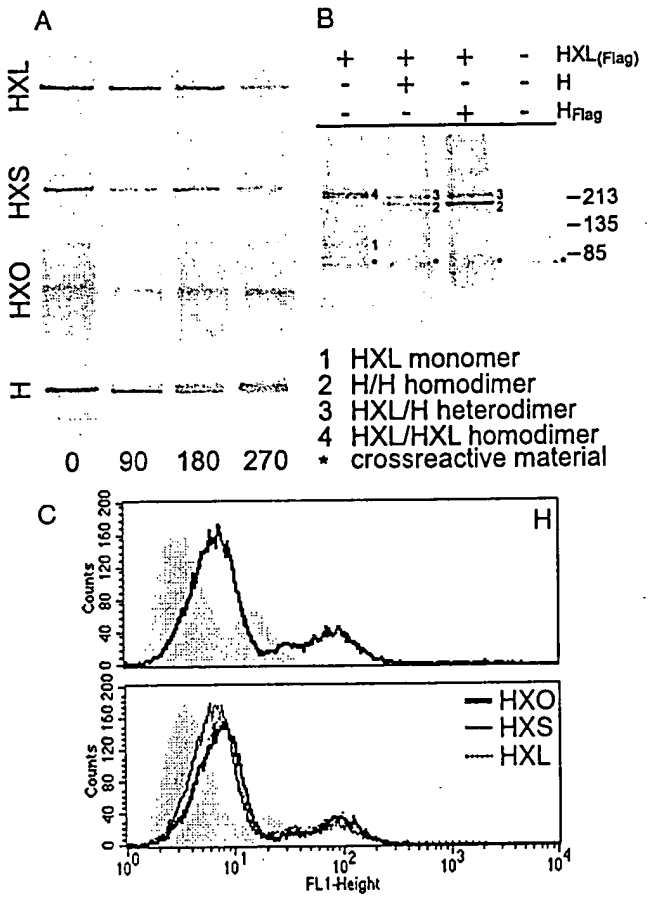

A
B
HXL
HXS
HXO
H
0 90 180 270
+ + + - HXL(Flag)
- + - - H
- - + - HFlag
−213
−135
−85
1 HXL monomer
2 H/H homodimer
3 HXL/H heterodimer
4 HXL/HXL homodimer
* crossreactive material
C
H
HXO
HXS
HXL
Counts
FL1-Height

FIG. 13

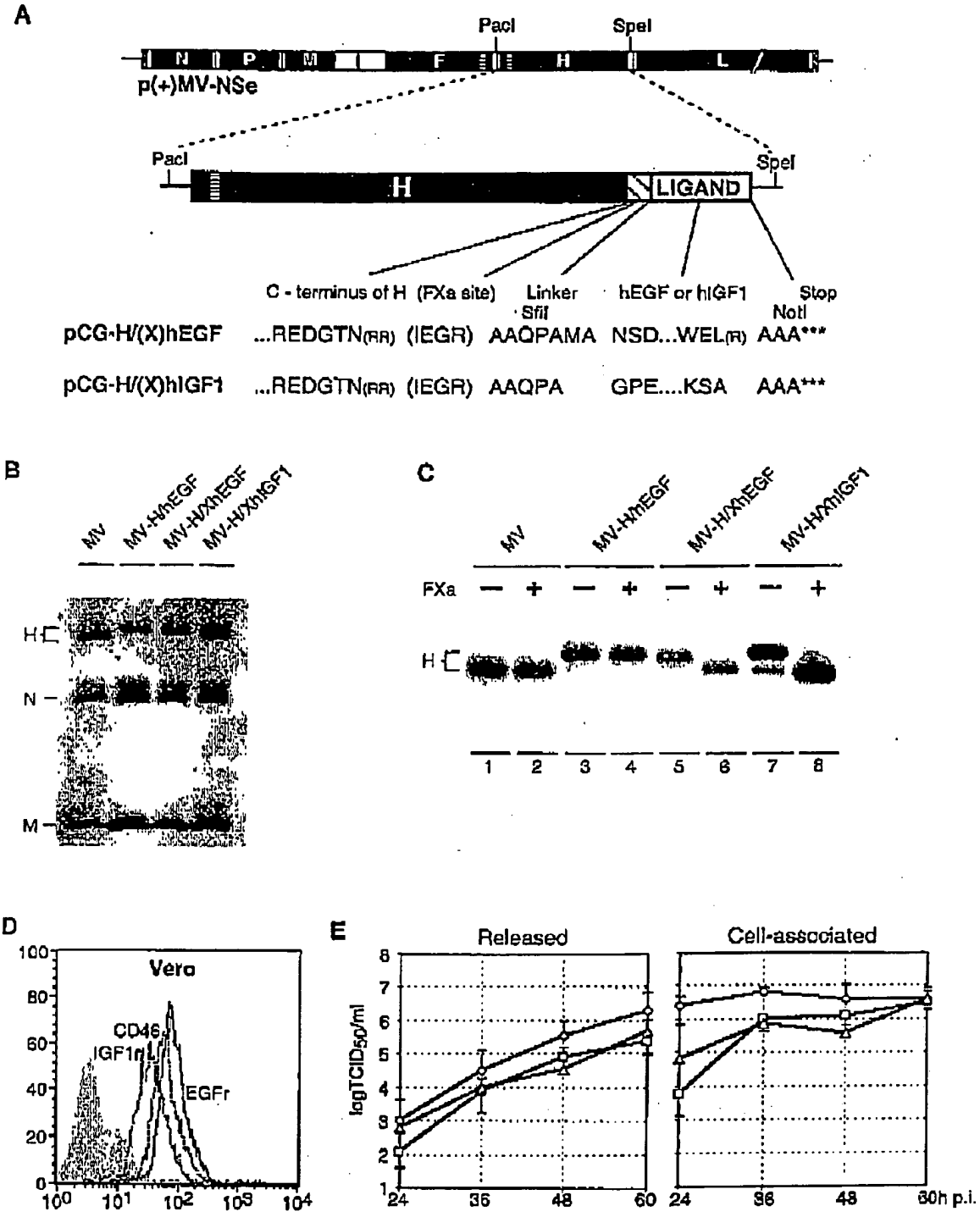

A
PacI
SpeI
N P M F H L
p(+)MV-NSe
PacI
SpeI
H
LIGAND
C - terminus of H (FXa site)
Linker
SfiI
hEGF or hIGF1
Stop
NotI
pCG-H/(X)hEGF ...REDGTN(RR) (IEGR) AAQPAMA NSD...WEL(R) AAA***
pCG-H/(X)hIGF1 ...REDGTN(RR) (IEGR) AAQPA GPE....KSA AAA***
B
MV
MV-H/hEGF
MV-H/XhEGF
MV-H/XhIGF1
H
N
M
C
MV
MV-H/hEGF
MV-H/XhEGF
MV-H/XhIGF1
FXa
H
1 2 3 4 5 6 7 8
D
Vero
CD46
IGF1r
EGFr
E
Released
Cell-associated
logTCID50/ml
24 36 48 60
24 36 48 60h p.i.

FIGURE 14

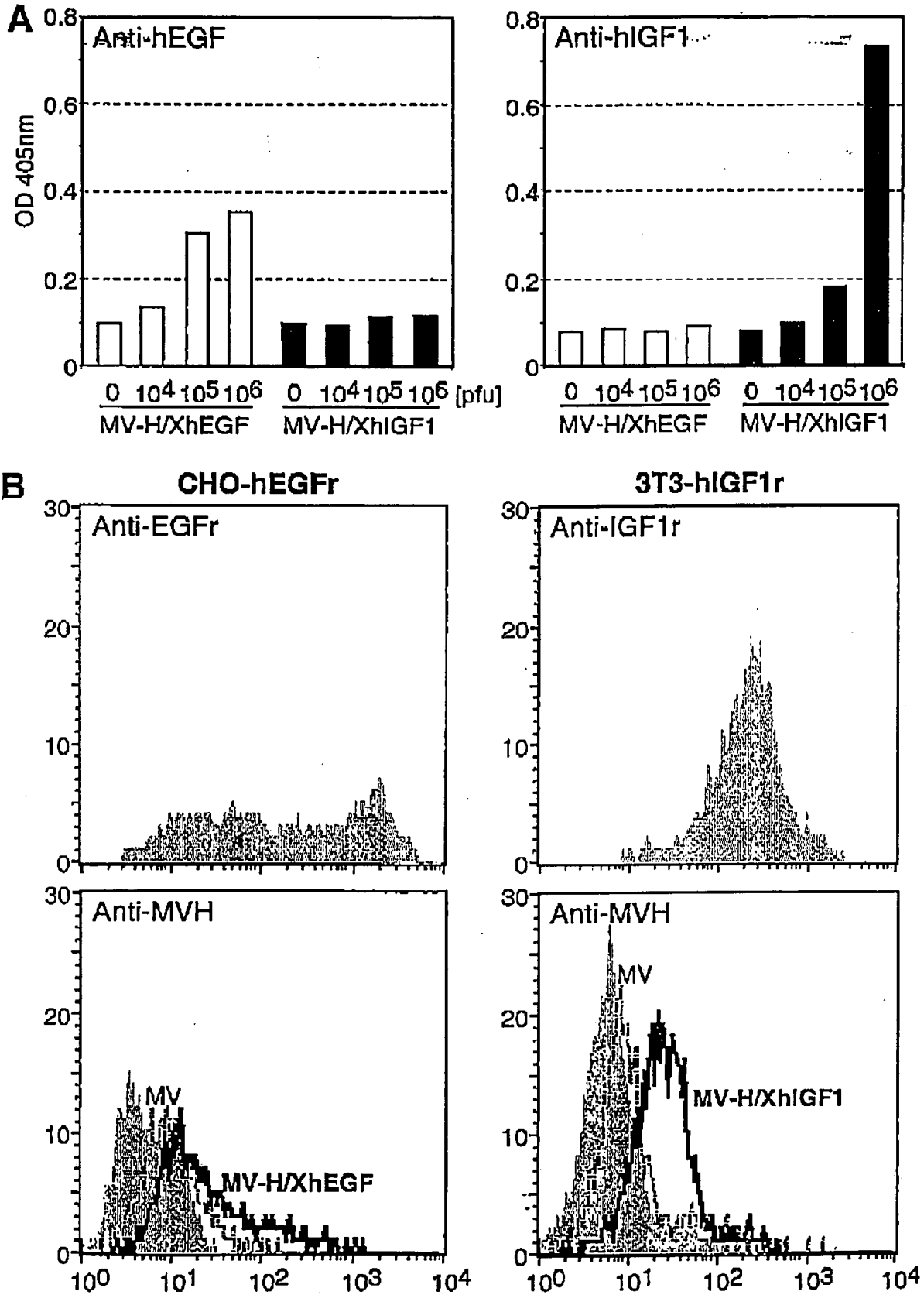
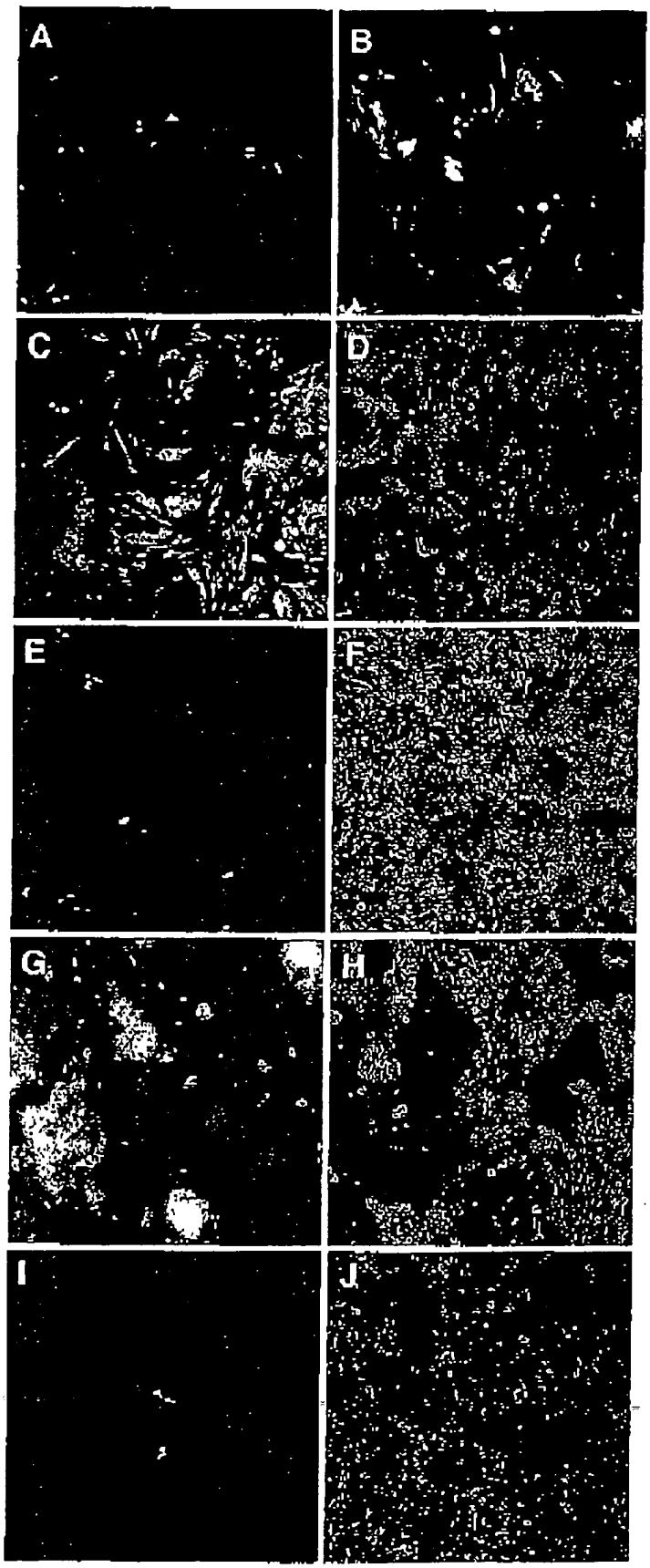

A
Anti-hEGF
Anti-hIGF1
OD 405nm
0.8
0.6
0.4
0.2
0
0 10⁴ 10⁵ 10⁶ 0 10⁴ 10⁵ 10⁶ [pfu]
MV-H/XhEGF
MV-H/XhIGF1
B
CHO-hEGFr
3T3-hIGF1r
Anti-EGFr
Anti-IGF1r
Anti-MVH
MV
MV-H/XhEGF
MV-H/XhIGF1
30
20
10
0
10⁰ 10¹ 10² 10³ 10⁴

FIG 15


A
B
C
D
E
F
G
H
I
J

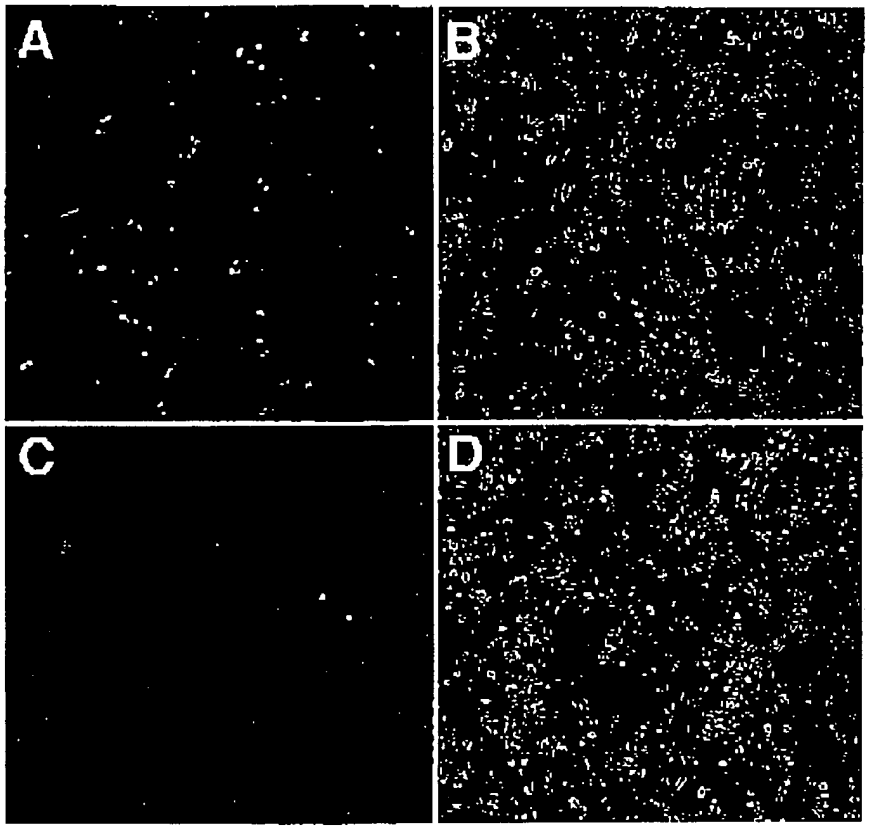


FIG. 17

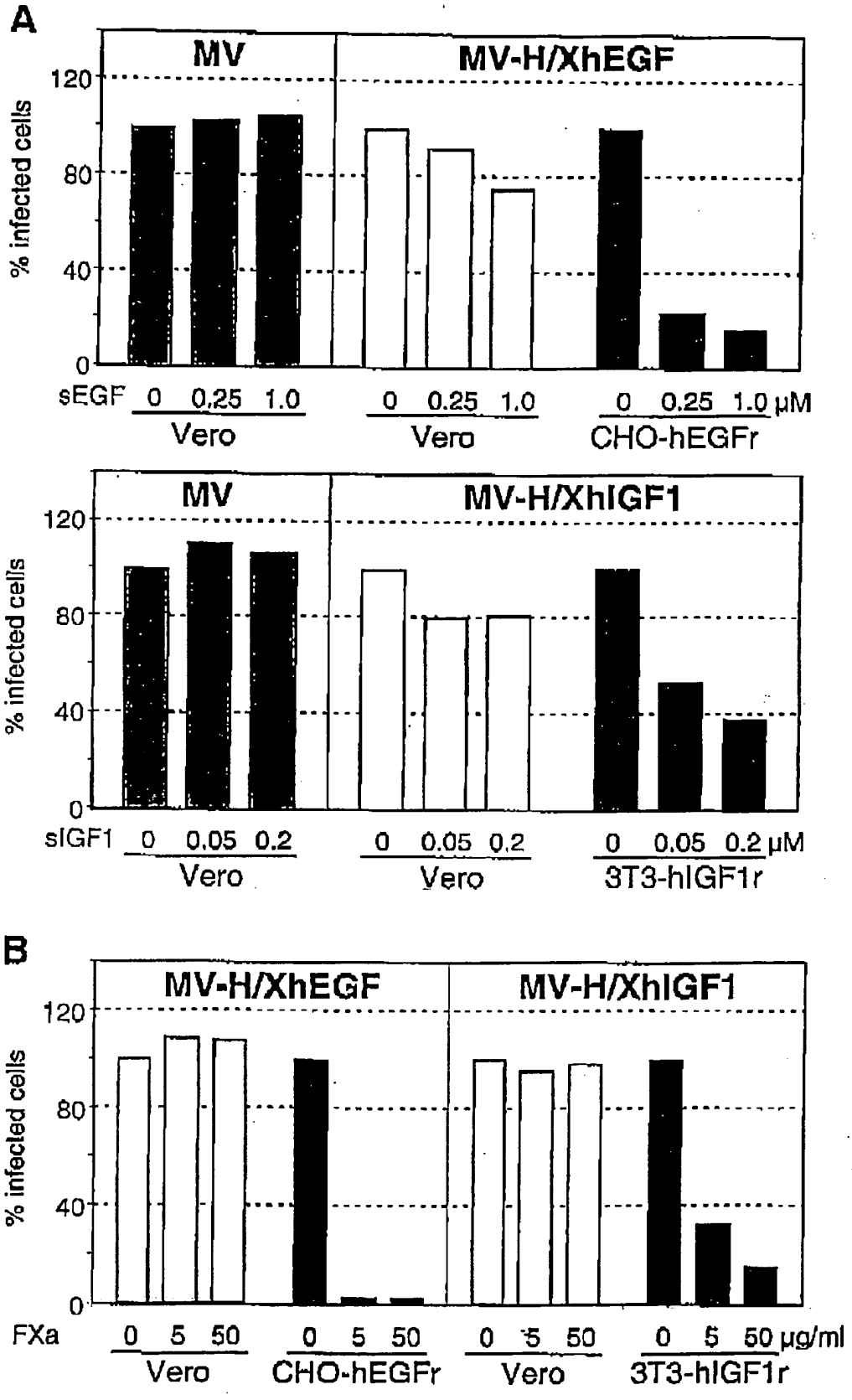
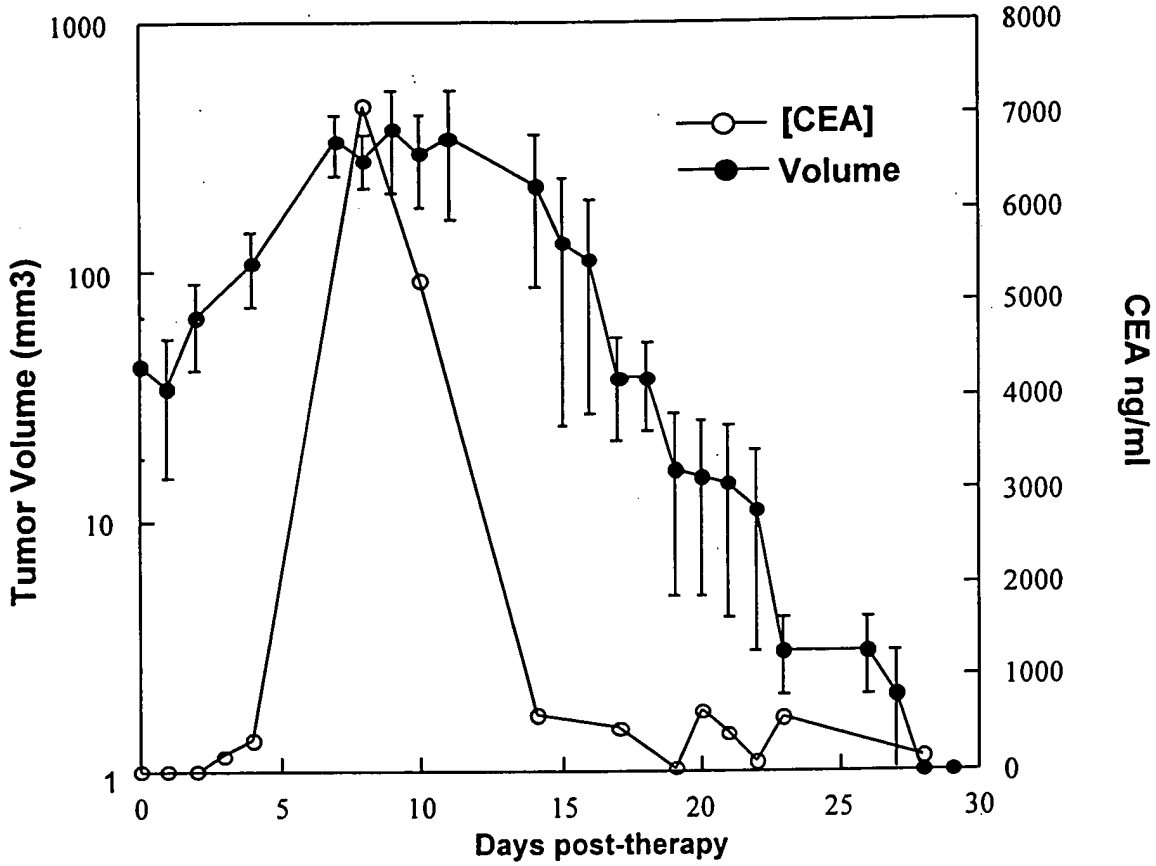

A
MV
MV-H/XhEGF
% infected cells
120
80
40
0
sEGF 0 0.25 1.0
0 0.25 1.0
0 0.25 1.0 µM
Vero
Vero
CHO-hEGFr
MV
MV-H/XhIGF1
% infected cells
120
80
40
0
sIGF1 0 0.05 0.2
0 0.05 0.2
0 0.05 0.2 µM
Vero
Vero
3T3-hIGF1r
B
MV-H/XhEGF
MV-H/XhIGF1
% infected cells
120
80
40
0
FXa 0 5 50
0 5 50
0 5 50
0 5 50 µg/ml
Vero
CHO-hEGFr
Vero
3T3-hIGF1r

FIGURE 18



Methods: SCID mice bearing established ARH-77 myeloma xenografts were injected intravenously with 1 x 107 pfu CEA-MV, twice per week for a total of 7 doses. The mice were bled and the amount of CEA in the serum was determined. The tumor volume at the time of bleeding and serum [CEA] were plotted against the days post initial therapy.

Results: The spread of CEA-MV in the growing tumors correlates with an increase in the amount of CEA detected in the serum of the mice. As the tumors regressed, there is a corresponding decrease in the amount of CEA release. Thus, replicative spread of the virus within the growing tumors can be tracked.

FIGURE 19